

Claims

- [c1] A method of solubilizing diterpenes such as forskolin, isoforskolin, 7-deacetylforskolin; their congeners, analogs and derivatives, of natural or synthetic origin, individually or as mixtures, in water.
- [c2] The diterpenes of Claim 1 may be obtained from a plant source such as but not limited to *Coleus forskohlii*
- [c3] The method of claim 1 wherein the solubilizing agent used is α -, β -, γ -cyclodextrins or their derivatized products such as randomly methylated β -cyclodextrin (RAMEBCD), 2-hydroxy-propyl- β -cyclodextrin (HPBCD), hydroxypropyl γ -cyclodextrin (HPGCD) preferably using randomly methylated β -cyclodextrin (RAMEBCD) as the complexing agent
- [c4] A method of preparing a clear solution containing 0.09% to 6% diterpenes such as forskolin, isoforskolin, their analogs or derivatives by mixing the compound with 5%–70% cyclodextrin or cyclodextrin derivatives.
- [c5] A method wherein the active compound is recrystallized from an organic solvent selected from ethanol, acetone, ethyl acetate, methylene chloride or other solvent, fol-

lowed by complexation with cyclodextrin or cyclodextrin derivatives by forming a suspension of the materials in water followed by agitation at room temperature for 40 to 160 hours and filtration.

- [c6] A method of preparing a clear aqueous formulation in solution or solid form, containing 0.09%–6% diterpenes such as forskolin, its analogs, congeners, or derivatives suitable for ophthalmic, topical and systemic uses.
- [c7] The formulation of Claim 6 may be compounded into capsules, tablets, food products, injectables, patches, ointments, gels, emulsions, creams, lotions, dentrifices, sprays, drops or other dosage forms including sustained release forms, for human or veterinary use.
- [c8] A method of use of the formulation of claim 6 alone or in combination with antioxidants and/or anti-glaucoma agents, in lowering intraocular pressure in animals or human subjects presenting with ocular hypertension or glaucoma.
- [c9] A method of use of the formulation of claim 6 alone or in combination with polyvinyl pyrrolidone, hyaluronic acid and derivatives, in animals or human subjects presenting with dry eye syndrome
- [c10] A method of use of the formulation of claim 6 in prepar–

ing water soluble molecular and receptor probes for research and commercial purposes.

- [c11] A method of use of the formulation of claim 6 to manifest the health benefits of diterpenes such as forskolin, its analogs, congeners and derivatives, in humans and animals, wherein the mode of administration is topical, percutaneous, intravenous, sublingual or oral.
- [c12] The material of claim in 1 is useful in delivering formulations of Forskolin and related diterpenes as diet drinks for management of obesity, weight management and improving lean body mass, hypertension, allergy among the known applications of forskolin.
- [c13] The material of claim in 1 is useful in delivering water soluble formulations of forskolin and related diterpenes as emulsions, sprays, solutions or aerosols, or cosmeceutical applications such as collagen boosting activity, anti-wrinkle properties, cellulite control, melanocyte modulator
- [c14] The material of claim in 1 could be used in combination with antioxidants, lipase inhibitors, other anti-obesity products including hydroxycitric acid, garcinol, and their salts, vasoirrigators, other known collagen boosters, anti-inflammatory agents, phosphodiesterase inhibitors,

among others.